fourth its original size, the wall of the sac being thick and firm; the voice is only slightly hoarse.—*N. Y. Surgical Society*, Jan. 12, 1887.

III. **Wound of the Internal Jugular Vein.** By JAMES BELL, M.D. (Montreal). A man, æt. 30 years, fell from a ladder driving a chisel into his neck about one inch behind the angle of the lower jaw and profuse hæmorrhage resulted. Compression of the common carotid appearing to arrest it somewhat, that artery was tied but without benefit. The wound was enlarged to find the bleeding point, but the hæmorrhage was so profuse that the search was ineffectual, although the blood seemed to come from a point near the base of the skull which could be felt with the finger in the wound. The bleeding was finally controlled by inserting three carbolized sponges well dusted with iodoform and binding them firmly down; one of the sponges was removed on the tenth day, another on the seventeenth day and the third after a month. Immediately after the accident, the man could not speak nor swallow. There had been no suppuration during the case, but the man had still a hoarse voice and some difficulty in swallowing, together with contraction of the right sterno-mastoid and contraction of the right pupil. The injury was believed to be a wound of the internal jugular vein near the point where it emerged from the jugular foramen, together with some injury to the right pneumogastric nerve with, at the same time wound, of the sympathetic trunk of that side as shown, by the myosis and a slight blepharoptosis.—*Montreal Medico-Chirurgical Society*, Jan. 14, 1887.

HEAD AND NECK.

I. **Cancer of the Tongue.** By F. LANGE, M.D. (New York). A vigorous and otherwise well-preserved man was afflicted with a cancer, originating from the fold between the margin of the tongue and the floor of the mouth on the right side and, though not presenting much superficial ulceration, it had infiltrated the soft parts toward the base of the tongue and in the suprahyoid region with glandular infiltration along the large vessels of the right side. The first symptoms had appeared about four months previously, and the main source of

trouble to the patient was a continuous abundant salivation. The exposure of the parts required resection of a portion of the inferior maxilla and the right half of the hyoid bone, by which free access to the diseased parts was obtained and the affected tissue removed down to the epiglottis and hyoid bone. The mucous membrane of the left half of the floor of the mouth had been preserved, and was then united to the mucous membrane of the external surface of the removed alveolar process; the tension presented required the further removal of the ascending portion of the maxilla and at this time, owing to the unavoidable manipulations of the removal and probably the irritation of the intra-maxillary nerve, a sudden deterioration of the pulse and appearance of the patient was observed. The external wounds were left open and loosely packed with iodoform gauze awaiting a secondary suture. The patient rallied well, but on the following day died suddenly; in the absence of an autopsy, the cause of death—possibly acute pneumonia or nephritis—remains unknown. In a similar case, the operation could be facilitated by preliminary ligature of both external carotid arteries, thus avoiding the hindrance caused by the ligature of many bleeding vessels. The tamponade of the trachea should also be kept up for some time after the operation.—*N. Y. Surgical Society*, Dec. 22, 1886.

II. **Partial Excision of Larynx for Epithelioma. Recovery.** By LENNOX BROWNE, F. R. C. S., Ed. (London). Male, æt. 61 years. Operated December 15, 1886. Tracheotomy between second and third rings, with introduction of Hahn's tampon-canula (a tube surrounded by compressed sponge). After twenty minutes for expansion of the sponge tampon, the median incision was extended from just above the tracheal opening to the lower margin of the hyoid bone, and all the tissues were carefully divided on a director until the thyroid cartilage was reached. The soft parts over the thyroid and cricoid cartilages were rasped sub-perichondrially, the raspatory being kept so close that the perichondrium was literally peeled away from the cartilage, whilst its relation to the superficial soft parts remained undisturbed. The separation was carried back by this means as far as the

median line of the boundary between the larynx and pharynx; no scissors, knife, or other instrument than the raspatory was used. No horizontal incision over the hyoid bone, the vertical one proving amply sufficient, but part of the hyoid attachment of the thyro-hyoid muscle was severed; the much ossified thyroid cartilage was then divided by cutting forceps along its centre; the wings were separated by retractors, and the growth was seen to be confined entirely to the left half of the larynx, which portion it was decided to remove.

Laryngectomy was effected by (*a*) further careful and thorough separation of the attachments to the pharynx by raspatory, knife-handle, and finger-nail; (*b*) division of the thyro-hyoid membrane, as close as possible to its thyroid attachment; (*c*) division of the left superior horn of the thyroid cartilage at its root by cutting pliers; (*d*) division in the median line of the cricoid cartilage, before and behind, with pliers; (*e*) the divided half of the larynx was then separated from the first ring of the trachea, and a few nicks only were necessary to remove it entire.

The following points regarding the operation are worthy of note. Hæmorrhage, the extent of which is usually described as serious, was, in point of fact, quite trifling; only two small vessels required torsion in the second stage of the operation. Not only were no vessels searched for, as recommended by most writers, but none of any size were exposed, this happy circumstance being doubtless due to the use of the raspatory in preference to scalpel or scissors, and also to keeping so close to the cartilage. The soft parts were little disturbed in consequence. The slight oozing which ensued after the removal of the diseased portion of the larynx was checked by a slight application of the galvano-cautery along the margin of division. This procedure was also adopted for the purpose of destroying any possible fragments of diseased tissue not removed. The left ary-epiglottic fold was divided close to the cartilage of Wrisberg, and the thyro-hyoid membrane close to its thyroid attachment, with the view of impairing as little as possible the action of the epiglottis. The successs of this plan was completely shown in the ease with which deglutition was effected three days later.

The dressings of the wound consisted in dusting with iodoform for two days, and packing with corrosive sublimate gauze. On the third day, iodol was substituted for iodoform, and within the week this was discontinued, the sublimate gauze only being used. All dressings, except adhesive plaster, were dispensed with after the thirteenth day.

The progress of the case was, till the eighth day, characterized by no event except of a favorable nature. The temperature rose to 101° Fahr. on the night of the operation, but after that it was hardly a degree above normal. There was slight bloody expectoration for twelve hours, and some slight pulmonary congestion and bronchitis; but the patient was cheerful, and at no time was pain complained of. The indications of pulse and respiration being equally favorable, the tampon-canula was removed in thirty hours, and an ordinary tracheotomy tube substituted; this was also removed at the expiration of seventy-two hours, and the patient breathed freely through the natural passages.

Up to this time liquid nourishment had been administered night and morning, poured from a jug into an œsophageal tube, with a funnel orifice. The food consisted of one pint of beef-tea, two eggs, two ounces of port wine, and two grains of Bullock's pepsine powder for each meal. The only discomfort experienced by the patient was that of thirst, which was allayed by small portions of ice; but, until the third day, he was not allowed to drink any fluid by the mouth. Seventy-eight hours after the operation, the patient was ordered a mutton chop to eat, according to the treatment of Hahn, who, for obvious reasons, recommends solid food as the first to be given by the mouth. The patient was able to sit up in bed, cut up his food, and eat it with relish. During all this time the weather had been very unfavorable, and early on the morning of the eighth day, which was exceptionally raw and cold, the patient's breathing became difficult and laboured, the temperature rose from 99.4° to 101.2°, the pulse from 100 to 112, and the respiration from 20 to 32. Unfortunately, the nurse, although recording these observations, did not recognize their importance, and the patient was not seen until this change had lasted over two hours. He was then found to be breathing with much difficulty and distress;

respirations and pulse were hardly to be counted, and the condition was one of alarm. It was evident that the upper air-passages were blocked, and though some benefit resulted from the introduction of a feather into the trachea, Mr. Lennox Browne decided to re-insert the tracheal tube through the original opening in the windpipe, which, happily, had not closed. Mustard and linseed poultices were applied to the chest, and steam constantly generated in the ward. The state of the patient was for two or three days one of great anxiety, but afterwards all again went well. On Christmas Day, the eleventh from the operation, he had turkey and champagne for dinner, and from that date convalescence was uninterrupted. He "got up" for the first time on the seventeenth day after operation. The tracheal tube was removed on the twentieth day, that is, on January 3. His weight was then 148 lbs., being a loss of 12 lbs. since the operation.

January 17, that is, the thirty-fourth day, tracheotomy-wound quite closed, but, though ample granulation has taken place, union of the upper portion is incomplete. This is due to the fact that, in consequence of inability to keep the edges of the soft parts whence the cartilages were removed on a level with those so supported, the skin on the left side has become inverted. For the rest, the patient speaks with a wonderfully good though rough voice.

JAMES E. PILCHER (U. S. Army).

III. **First Case of Cure of a Larynx Cancroid by Extirpation per Vias Naturales.** By Prof. B. FRANKEL (Berlin). The patient was Prof. Wiggers, of Rostock, a member of the German Reichstag. Treatment was begun in 1881, when he was 70 years old. A bean-sized growth was situated on the middle of the right vocal cord. In September, 1881, this was removed with the (wire) loop and a galvano-cautery applied to the base. Microscopic examination proved it to be an epithelial cancer. A year later F. similarly removed a recurrent growth from the front end of the former location. Another bean-sized recurrence was removed piecemeal the end of May, 1883. In February, 1884, a much broader local relapse was removed with loop and forceps. This was denominated a cancroid by Virchow. By this time a hard gland, size of a hen's egg, had also developed be-

neath the sterno-cleido. Madelung, of Rostock, successfully removed this, several smaller glands and a 5 ctm. piece of the involved common jugular. Primary union without recurrence from these secondaries. However, it had appeared again in the larynx by June, 1884. This was also removed through the mouth, but instead of using the loop as a cutting instrument, he allowed it to grasp the growth firmly and then tore it off. In two sittings the broad base was extirpated. Since he had meanwhile become impressed with the ill effect of the thermo-cautery on carcinoma it was not applied this time. Since this last operation nearly two years had elapsed with no recurrence. A cure had finally been effected in a person of 75 years, and with the preservation of a loud, clear voice. In the only previous like attempt that he could find (Oertel's) the tumor did not prove to be an epithelioma.

The seat and extent of trouble set limits to this method. Now it will, of course, be greatly facilitated by local anæsthesia.—*Arch. f. klin. Chir.*, 1886, Bd. 34, Hft. ii.

ABDOMEN.

I. On the Operative Treatment of Intestinal Invagination. By Prof. H. BRAUN (Jena). The number of these cases seen by even an experienced observer usually remains small, hence the greater reason for collective comparison. The older collections of Ashhurst (1874, 13 cases), Sands (1877, 21 cases) and Widerhofer (1870) are too small, and the newer ones of Saltzmann (1882, 29 cases), Beklewski (1883, 29 cases) and Schramm (1884, 26 or 27 cases) he considers lacking in detail. He does not essay the general subject of treating internal intussusception but only the operative side.

A case of his own is first given. It was in a boy of 3 months. The first couple of days all kinds of bloodless means were tried unsuccessfully. Laparotomy on the fifth day. In attempting to draw out the invaginated part it ruptured. Exsection with suture of the gut was then performed. Death an hour later. It proved to have been an